

REMARKS

In the final Office Action, the Examiner rejects claims 1, 3, 4, 6-9, 11, 12, 14-20, 22, 24, 25, 27, and 28 under 35 U.S.C. § 102(e) as anticipated by CHAN et al. (U.S. Patent No. 6,910,028); rejects claims 2, 10, 21, and 23 under 35 U.S.C. § 103(a) as unpatentable over CHAN et al. in view of HWANG (“Detecting Faults In Chained-Inference Rules In Information Distribution Systems,” Dissertation, George Mason University; 1997); and rejects claims 5, 13, and 26 under 35 U.S.C. § 103(a) as unpatentable over CHAN et al. in view of BAHRAMI (U.S. Patent Application Publication No. 2004/0078777). Applicant respectfully traverses these rejections.¹

Claims 1, 3, 4, 6-9, 11, 12, 14-20, 22, 24, 25, 27, and 28 stand rejected under 35 U.S.C. § 102(e) as allegedly anticipated by CHAN et al. Applicant respectfully traverses this rejection.

A proper rejection under 35 U.S.C. § 102 requires that a reference teach every aspect of the claimed invention. Any feature not directly taught must be inherently present. See M.P.E.P. § 2131. CHAN et al. does not disclose or suggest the combination of features recited in Applicant’s claims 1, 3, 4, 6-9, 11, 12, 14-20, 22, 24, 25, 27, and 28.

For example, claim 1 recites a method of integrating software systems. The method includes identifying a scope of the integration based on a multi-level top-down approach; identifying faults in business rules that define software in the scope of the integration by applying generic depth-first search (DFS)-based techniques to the business

¹ As Applicant’s remarks with respect to the Examiner’s rejections are sufficient to overcome these rejections, Applicant’s silence as to assertions by the Examiner in the Office Action or certain requirements that may be applicable to such rejections (e.g., whether a reference constitutes prior art, motivation to combine reference, assertions as to dependent claims, etc.) is not a concession by Applicant that such assertions are accurate or such requirements have been met, and Applicant reserves the right to analyze and dispute such assertions/requirements in the future.

rules; and modifying the business rules based on the identified faults. CHAN et al. does not disclose or suggest this combination of features.

For example, CHAN et al. does not disclose or suggest identifying faults in business rules that define software in the scope of the integration of software systems by applying generic depth-first search (DFS)-based techniques to the business rules, and modifying the business rules based on the identified faults. The Examiner appears to rely on column 3, line 58 – column 4, line 20; column 5, line 29; Fig. 2; column 6, lines 11-12 (which describes Fig. 2) and 43-61; column 7, lines 44-52; column 8, lines 24-32, 43-46, and 67 of CHAN et al. as allegedly disclosing these features (final Office Action, pp. 4-5). Applicant respectfully disagrees with the Examiner's interpretation of CHAN et al.

At column 3, line 58 – column 4, line 20, CHAN et al. discloses:

It is an object of the present invention to provide for a rule-base knowledge system a conflict handling and assimilator mechanism for enabling the exchange or merger of rules with different format and, resolving conflicts among the merged rules.

It is a further object of the present invention to provide for a flexible assimilator service that allows for the exchange or merger of rulesets (e.g., business policies) with different formats in a distributed environment such as the World-Wide-Web or Internet.

It is another object of the present invention to provide for a flexible assimilator service that allows for the exchange or merger of rulesets (e.g., business policies) with different originating formats in a distributed environment such as the World-Wide-Web or Internet, and further enables the resulting merged rules to be translated to any other formats other than the originating ones.

It is another object of the present invention to provide for a flexible assimilator service that allows for the exchange or merger of rulesets (e.g., business policies) with different originating formats in a distributed environment such as the World-Wide-Web or Internet, and further enables the resulting merged rules to be translated to any "rule-engine" neutral format thus enabling the ruleset to be used in any available rule engine which fits the application.

According to the invention, there is provided a system and method for merging two or more rulesets provided in rule-based systems associated with applications executing at different locations, each ruleset comprising rules in potential conflict with each other.

This section of CHAN et al. discloses a system for enabling the exchange or merger of rules with different formats and for resolving conflicts among the merged rules. This section of CHAN et al., thus, discloses merging rules and does not disclose either identifying faults or modifying business rules based on the identified faults. Therefore, this section of CHAN et al. cannot disclose or suggest identifying faults in business rules that define software in the scope of the integration of software systems by applying generic depth-first search (DFS)-based techniques to the business rules, and modifying the business rules based on the identified faults, as recited in claim 1.

At column 5, line 29, CHAN et al. discloses a merge policy that defines rules and conflict resolution prioritization schemes utilized by a system for enable the merging of rule sets. This section of CHAN et al. does not disclose, suggest or even mention identifying faults and modifying business rules based on the identified faults. Therefore, this section of CHAN et al. cannot disclose or suggest identifying faults in business rules that define software in the scope of the integration of software systems by applying generic depth-first search (DFS)-based techniques to the business rules, and modifying the business rules based on the identified faults, as recited in claim 1.

At column 6, lines 11-12, CHAN et al. discloses that Fig. 2 is a diagram depicting the high-level interaction between various components underlying conflict handling and assimilator service for rule-based knowledge systems. This section of CHAN et al. does not disclose, suggest or even mention identifying faults and modifying business rules based on the identified faults. Therefore, this section of CHAN et al. cannot disclose or suggest identifying faults in business rules that define software in the scope of the integration of software systems by applying generic depth-first search (DFS)-based

techniques to the business rules, and modifying the business rules based on the identified faults, as recited in claim 1.

At column 6, lines 43-61, CHAN et al. discloses:

Generally, the role of the Conflict Transformer 15 is to analyze the input rulesets for conflicts and resolve conflicts among rules from one or more rulesets based on the user-defined merge policy. The merge policy expressed in CLP includes syntax and semantics to express conflict resolution via the priority specification and mutual exclusion statements. A more detailed explanation on the operation and mechanism of the Conflict Transformer may be found in the references entitled Compiling Prioritized Default Rules Into Ordinary Logic Programs by Benjamin Grosz, IBM Research Report RC21472, May 7, 1999, and available from <http://www.research.ibm.com/rules/paps/rc21472.pdf>; and 2) A Courteous Compiler From Generalized Courteous Logic Programs to Ordinary Logic Programs by Benjamin Grosz, Supplementary Update follow-on to IBM Research rc21472, Jul. 2, 1999, and available from <http://www.research.ibm.com/rules/paps/gclp/report1.pdf>, the whole contents and disclosure of each, and references cited therein, are incorporated by reference as if fully set forth herein.

This section of CHAN et al. discloses that the role of the Conflict Transformer is to analyze an input rulesets for conflicts and resolve conflicts among rules from one or more rulesets based on a user-defined merge policy. This section of CHAN et al. discloses analyzing and resolving conflicts, not identifying faults in business rules that define software in the scope of the integration of software systems by applying generic depth-first search (DFS)-based techniques to the business rules, and modifying the business rules based on the identified faults, as recited in claim 1.

At column 7, lines 44-52, CHAN et al. discloses that a Conflict Transformer receives an input ruleset and a facts premise, analyzes the rules for conflicts, introduces new rules, and predicates based on the specifications of a merge policy. This section of CHAN et al. does not disclose or suggest identifying faults in business rules that define software in the scope of the integration of software systems by applying generic depth-first search (DFS)-based techniques to the business rules, and modifying the business rules based on the identified faults, as recited in claim 1.

At column 8, lines 24-32, CHAN et al. discloses:

Partially ordered priorities are relatively natural to specify. For example, they represent well preference for more recently acquired rules (e.g., as in database updating or legislation), or for rules from more authoritative sources (e.g., as in bureaucratic workflow, security authorization, or legal jurisdiction), or for rules that are more specific (e.g., as in object-oriented inheritance or special-case exceptions). S1 and S2 may or may not contain the expressive features to specify priorities and/or mutual exclusions.

This section of CHAN et al. discloses that partially ordered priorities represent a preference for more recently acquired rules, rules from more authoritative sources, or rules that are more specific. This section of CHAN et al. does not disclose, suggest or even mention identifying faults and modifying business rules based on the identified faults. Therefore, this section of CHAN et al. cannot disclose or suggest identifying faults in business rules that define software in the scope of the integration of software systems by applying generic depth-first search (DFS)-based techniques to the business rules, and modifying the business rules based on the identified faults, as recited in claim 1.

At column 8, lines 43-46, CHAN et al. discloses that two businesses may merge rulesets to determine how compatible their policies are. This section of CHAN et al. does not disclose, suggest, or even mention identifying faults and modifying business rules based on the identified faults. Therefore, this section of CHAN et al. cannot disclose or suggest identifying faults in business rules that define software in the scope of the integration of software systems by applying generic depth-first search (DFS)-based techniques to the business rules, and modifying the business rules based on the identified faults, as recited in claim 1.

At column 8, line 67, CHAN et al. discloses that inferring conclusions about “overrides” predicate, derived from rules possibly via chaining, is permitted. This

section of CHAN et al. does not disclose, suggest, or even mention identifying faults and modifying business rules based on the identified faults. Therefore, this section of CHAN et al. cannot disclose or suggest identifying faults in business rules that define software in the scope of the integration of software systems by applying generic depth-first search (DFS)-based techniques to the business rules, and modifying the business rules based on the identified faults, as recited in claim 1.

On page 3 of the final Office Action, the Examiner alleges that Applicant has defined faults to include conflicts and relies on column 6, lines 42-45 of CHAN et al. for allegedly disclosing the above-feature of claim 1. Applicant respectfully disagrees with the Examiner's assertion. As noted above, at column 6, lines 42-45, CHAN et al. discloses that the role of the Conflict Transformer is to analyze input rulesets for conflicts and resolve conflicts among rules from one or more rulesets based on a user-defined merge policy. This section of CHAN et al. discloses resolving conflicts based on a user-defined merge policy, not identifying faults in business rules that define software in the scope of the integration of software systems by applying generic depth-first search (DFS)-based techniques to the business rules, and modifying the business rules based on the identified faults, as recited in claim 1. In fact, nowhere does CHAN et al. disclose applying generic depth-first search (DFS)-based techniques to business rules. The Examiner continues to ignore this feature. CHAN et al. does not disclose or suggest identifying faults in business rules that define software in the scope of the integration by applying generic depth-first search (DFS)-based techniques to the business rules, and modifying the business rules based on the identified faults, as recited in claim 1.

For at least the foregoing reasons, Applicant submits that claim 1 is not anticipated by CHAN et al. Thus, Applicant respectfully requests that the rejection of claim 1 under 35 U.S.C. § 102(e) be reconsidered and withdrawn.

Claims 3, 4, and 6-8 depend from claim 1. Therefore, claims 3, 4, and 6-8 are not anticipated by CHAN et al. for at least the reasons given above with respect to claim 1.

Independent claims 9, 17, and 22 recite features similar to, yet possibly of different scope than, features recited above with respect to claim 1. Therefore, claims 9, 17, and 22 are not anticipated by CHAN et al. for at least the reasons given above with respect to claim 1.

Claims 11, 12, and 14-16 depend from claim 9. Therefore, claims 11, 12, and 14-16 are not anticipated by CHAN et al. for at least the reasons given above with respect to claim 9.

Claims 18-20 depend from claim 17. Therefore, claims 18-20 are not anticipated by CHAN et al. for at least the reasons given above with respect to claim 17.

Claims 24, 25, 27, and 28 depend from claim 22. Therefore, claims 24, 25, 27, and 28 are not anticipated by CHAN et al. for at least the reasons given above with respect to claim 22.

Claims 2, 10, 21, and 23 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over CHAN et al. in view of HWANG. Applicant respectfully traverses this rejection.

Claim 2 depends from claim 1. Without acquiescing in the rejection of claim 2, Applicant submits that the disclosure of HWANG does not remedy the deficiencies in the disclosure of CHAN et al. set forth above with respect to claim 1. Therefore, claim 2 is

patentable over CHAN et al. and HWANG, whether taken alone or in any reasonable combination, for at least the reasons set forth above with respect to claim 1.

Claim 10 depends from claim 9. Without acquiescing in the rejection of claim 10, Applicant submits that the disclosure of HWANG does not remedy the deficiencies in the disclosure of CHAN et al. set forth above with respect to claim 9. Therefore, claim 10 is patentable over CHAN et al. and HWANG, whether taken alone or in any reasonable combination, for at least the reasons set forth above with respect to claim 9.

Claim 21 depends from claim 17. Without acquiescing in the rejection of claim 21, Applicant submits that the disclosure of HWANG does not remedy the deficiencies in the disclosure of CHAN et al. set forth above with respect to claim 17. Therefore, claim 21 is patentable over CHAN et al. and HWANG, whether taken alone or in any reasonable combination, for at least the reasons set forth above with respect to claim 17.

Claim 23 depends from claim 22. Without acquiescing in the rejection of claim 23, Applicant submits that the disclosure of HWANG does not remedy the deficiencies in the disclosure of CHAN et al. set forth above with respect to claim 22. Therefore, claim 23 is patentable over CHAN et al. and HWANG, whether taken alone or in any reasonable combination, for at least the reasons set forth above with respect to claim 22.

Claims 5, 13, and 26 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over CHAN et al. in view of BAHRAMI. Applicant respectfully traverses this rejection.

Claim 5 depends from claim 4. Without acquiescing in the rejection of claim 5, Applicant submits that the disclosure of BAHRAMI does not remedy the deficiencies in the disclosure of CHAN et al. set forth above with respect to claim 4. Therefore, claim 5

is patentable over CHAN et al. and BAHRAMI, whether taken alone or in any reasonable combination, for at least the reasons set forth above with respect to claim 4.

Claim 13 depends from claim 12. Without acquiescing in the rejection of claim 13, Applicant submits that the disclosure of BAHRAMI does not remedy the deficiencies in the disclosure of CHAN et al. set forth above with respect to claim 12. Therefore, claim 13 is patentable over CHAN et al. and BAHRAMI, whether taken alone or in any reasonable combination, for at least the reasons set forth above with respect to claim 12.

Claim 26 depends from claim 25. Without acquiescing in the rejection of claim 26, Applicant submits that the disclosure of BAHRAMI does not remedy the deficiencies in the disclosure of CHAN et al. set forth above with respect to claim 25. Therefore, claim 26 is patentable over CHAN et al. and BAHRAMI, whether taken alone or in any reasonable combination, for at least the reasons set forth above with respect to claim 25.

In view of the foregoing remarks, Applicant respectfully requests withdrawal of the outstanding rejections and the timely allowance of this application.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 50-1070 and please credit any excess fees to such deposit account.

Respectfully submitted,

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